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TRANSMITTAL OF APPEAL BRIEF (Small Entity)

Docket No.
FIRELIGHT

In Re Application Of: **Harp et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/766,628	Sept. 30, 2003	Carl D. Price	34534	3749	

Invention:

FIRELIGHT REFLECTIVE SYSTEM AND METHOD

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

☐ ☒ Applicant claims small entity status. See 37 CFR 1.27

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Kevin Lynn Wildenstein
Signature

Dated: **December 12, 2006**

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Applicant(s): Harp et al.

Docket No.

FIREPLACE

Application No.

10/766,628

Filing Date

Sept. 30, 2003 (P)

Examiner

Carl D. Price

Customer No.

34534

Group Art Unit

3749

FIRELIGHT REFLECTIVE SYSTEM AND METHOD

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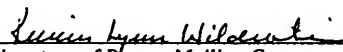
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Appl. Serial No. 10/766,628
Brief on Appeal

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPEALS DIVISION**

Applicant:	HARP <i>et al</i>	Docket Ref.:	FIREPLACE
Serial No.:	10/766,628		
Filing Date:	Oct. 14, 2003	Group Art Unit:	3748
Title:	FIRELIGHT REFLECTIVE SYSTEM AND METHOD	Examiner:	Carl D. Price

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BRIEF ON APPEAL

In response to the Advisory Action dated September 19, 2006 and pursuant to Appellant's Notice of Appeal filed on December 6, 2006, Appellant presents this Brief and fee under 37 C.F.R. § 1.17(c) in appeal of the Final Rejection dated Sept. 19, 2006 (hereafter, "Advisory Action").

Pursuant to 37 C.F.R. § 41.20(b)(2), a check for \$250.00 is herewith submitted to cover this appeal brief fee.

I. REAL PARTY IN INTEREST.

The Appellants Dennis Harp and Debra Harp are the real parties in interest.

II. RELATED APPEALS AND INTERFERENCES.

There are no related appeals or interferences before the Board of Patent Appeals and Interferences known to Appellant, the Appellant's legal representatives, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS.

A total of twenty (20) claims have been presented in the application and their status is as follows:

Claims 1 – 6 and 8 – 20 stand finally rejected and are the claims subject to this appeal. Of these claims, Claim 1, 11 and 17 are independent claims.

Claims 2-6 and 8 - 10 depend upon independent Claim 1, claims 12 - 16 depend upon independent Claim 11 and claims 18 - 20 depend upon independent Claim 17.

Claim 7 is cancelled.

Appendix A includes a copy of the claims subject to this Appeal.

IV. STATUS OF AMENDMENTS.

There are no pending amendments to the claims which have not been entered by the Office.

V. SUMMARY OF CLAIMED SUBJECT MATTER.

Embodiments of the instant invention relate to a firelight reflective system insertable within, or permanently attachable to, one or more interior surfaces of a fireplace or a firebox. The present invention is, in one embodiment, one or more sheets of a light or image reflective material (such as, for example, high tempered or polished mirrored glass) which are each measured to substantially fit, and be parallel to, one or more of the interior walls of a conventional firebox. In one example, the mirrored glass has a viewable surface and a coupling surface. A fire-proof adhesive is placed upon the coupling surface to couple or otherwise securely attach the mirrored glass to one of the corresponding interior surfaces of the firebox. See Specification, p. 4, ll. 1 – 9 of ¶ 0008. Each light reflective material (such as, for example, high tempered mirrored glass) is measured to substantially fit on one or more of the interior surface of a firebox, and which are coupled to one or more interior surface walls of the firebox in a position substantially parallel to the firebox's interior surface wall. Specification, p. 6, ll. 1 – 7 of ¶ 0020. In another embodiment, the present invention is a fire flamelight reflective system 10 comprising at least one light or image reflective material 11_n having a light or image reflective viewable surface 11a and a coupling surface 11b (as seen in FIG. 1a). In one embodiment, the light reflective surface 11a comprises a mirrored glass substrate having a polished surface optimized for light or image reflectivity while diminishing any light or image scattering. In another embodiment, the mirrored glass has an approximately flat substrate surface. The viewable surface 11a is adapted to reflect an image (such as a firelight flame generated by fire producing element 15) generated from within the fireplace, so that the viewable surface acts like a mirror wherein images emitting or reflecting light within the firebox will reflect off of the viewable surface so that the angles of incidence and reflection are substantially or exactly equal

to a viewer of the fireplace. Specification, *p. 8, ll. 1 – 15 of ¶ 0022. See also Figures 1 – 7.*

Independent Claim 1

Referring to Appellant's independent claim 1, the following table identifies the basis for claim 1 [by page and line number in the Specification and to the drawings]:

<u>Claim 1:</u>	<u>Basis for Claim Recitation in Specification:</u>
A firelight reflective system for use within a fireplace having a firebox with a pre-determined interior surface structure, the system comprising	<i>p. 1, ll. 1- 5 of ¶ 0002; p. 3, ll. 1- 7 of ¶ 0006; p. 4, ll. 1- 11 of ¶ 0008; p. 6, ll. 1- 17 of ¶ 0020; pp. 6 - 7, ll. 1- 7 of ¶ 0021; p. 7, ll. 1- 4 of ¶ 0022; and Figures 1, 1a, 2, 3, 4, 5, 6, 7.</i>
at least one light or image reflective material having a viewable surface and a coupling surface,	<i>p. 7, ll. 1 – 15 of ¶ 0022; p. 8, ll. 1 – 12 of ¶ 0024; and Figures 1, 1a, 2, 3, 4, 5, 6, 7.</i>
each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the firebox,	<i>p. 7, ll. 1 – 15 of ¶ 0022; pp. 7 - 8, ll. 1 – 14 of ¶ 0023; p. 8, ll. 1 – 12 of ¶ 0024; ; and Figures 1, 1a, 2, 3, 4, 5, 6, 7.</i>
the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox.	<i>p. 1, ll. 4 – 5 of ¶ 0002; p. 3, ll. 5 – 7 of ¶ 0006; p. 7, ll. 9 – 15 of ¶ 0022; p. 9, ll. 12 – 17 of ¶ 0025; and Figures 1, 1a, 2, 3, 4, 5, 6, 7.</i>

Independent Claim 11

Referring to Appellant's independent claim 11, the following table identifies the basis for claim 11 [by page and line number in the Specification and to the drawings]:

Claim 11:

A method for reflecting firelight emitting from a fireplace having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein housing a fire flamelight producing element, the method comprising the steps of:

a) introducing at least one light or image reflective material, the material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the fire chamber, and

b) removeably attaching a pre-selected coupling surface to a predetermined surface portion within the fire chamber,

the method adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the fire chamber.

Basis for Claim Recitation in Specification:

p. 1, ll. 1- 5 of ¶ 0002;
p. 3, ll. 1- 7 of ¶ 0006;
p. 4, ll. 1- 11 of ¶ 0008;
p. 6, ll. 1- 17 of ¶ 0020;
pp. 6 - 7, ll. 1- 7 of ¶ 0021;
p. 7, ll. 1- 4 of ¶ 0022; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.

p. 6, ll. 1 – 7 of ¶ 0020;
p. 7, ll. 1 – 15 of ¶ 0022;
pp. 7 - 8, ll. 1 – 14 of ¶ 0023;
p. 8, ll. 1 – 12 of ¶ 0024; ; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.

pp. 7 - 8, ll. 1 – 14 of ¶ 0023;
p. 8, ll. 1 – 12 of ¶ 0024; ; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.

p. 1, ll. 4 – 5 of ¶ 0002;
p. 3, ll. 5 – 7 of ¶ 0006;
p. 7, ll. 9 – 15 of ¶ 0022;
p. 9, ll. 12 – 17 of ¶ 0025; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.

Independent Claim 17

Referring to Appellant's independent claim 17, the following table identifies the basis for claim 17 [by page and line number in the Specification and to the drawings]:

Claim 17:

A method for reflecting firelight emitting from a fireplace having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein housing a fire flamelight producing element, the method comprising the steps of:

a) introducing at least one light or image reflective material, the material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the fire chamber, and

b) removeably attaching a pre-selected coupling surface to a predetermined surface portion within the fire chamber,

the method adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the fire chamber.

Basis for Claim Recitation in Specification:

*p. 1, ll. 1- 5 of ¶ 0002;
p. 3, ll. 1- 7 of ¶ 0006;
p. 4, ll. 1- 11 of ¶ 0008;
p. 6, ll. 1- 17 of ¶ 0020;
pp. 6 - 7, ll. 1- 7 of ¶ 0021;
p. 7, ll. 1- 4 of ¶ 0022; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.*

*p. 6, ll. 1 - 7 of ¶ 0020;
p. 7, ll. 1 - 15 of ¶ 0022;
pp. 7 - 8, ll. 1 - 14 of ¶ 0023;
p. 8, ll. 1 - 12 of ¶ 0024; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.*

*pp. 7 - 8, ll. 1 - 14 of ¶ 0023;
p. 8, ll. 1 - 12 of ¶ 0024; ; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.*

*p. 1, ll. 4 - 5 of ¶ 0002;
p. 3, ll. 5 - 7 of ¶ 0006;
p. 7, ll. 9 - 15 of ¶ 0022;
p. 9, ll. 12 - 17 of ¶ 0025; and
Figures 1, 1a, 2, 3, 4, 5, 6, 7.*

Additional variants are disclosed and represented in the dependent claims.

Finally, pending independent claims 1, 11, and 17 do not contain any means plus function recitations. Additionally, pending dependent claims 2 - 10, 12 - 16 and 18 - 20 also do not contain any means plus function recitations.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.

The issues for consideration on this appeal are:

- A. Whether the Examiner erred in rejecting claims 1-6 and 10-20 as being anticipated by or unpatentable over U.S. Patent No. 5,469,839 to Kasulis et al. (the “Kasulis patent”) under 35 U.S.C. § 102; and
- B. Whether the Examiner erred in rejecting dependent claims 8 - 9 under 35 U.S.C. § 103(a) as being unpatentable over the Kasulis patent in view of Japan disclosure 2003-79507 under 35 U.S.C. § 103, when corresponding independent claim 1 was not rejected as being unpatentable over the Kasulis patent in view of Japan disclosure 2003-79507 under 35 U.S.C. § 103.

VII. ARGUMENT

1. *Independent Claims 1, 11 and 17 (and those Claims Dependant Thereon) Are Patentable Over the Kasulis patent Pursuant to 35 U.S.C. § 102*

Independent Claims 1, 11 and 17 (and those claims that depend thereon) stand finally rejected under 35 U.S.C. § 102 as being anticipated by the Kasulis patent.¹ Appellant

¹ The Office rejects claims 1 – 6 and 8 – 20 under Section 102 based only upon the Kasulis patent. *See* Advisory Action, p. 5. However, in its Section 102 analysis, the Office also recites to portions of numerous other prior art documents (e.g., U.S. Patent No. 3,877,802 to Shumaker, U.S. Patent No. 4,309,142 to Greenspan, U.S. Patent No. 3,942,879 to Pledger, GB2220060 to Butterfield, U.S. Patent No. 4,121,114 to Hiser and U.S. Patent No. 4,667,607 to Fleming) to fill the gaps not found in the Kasulis patent. *See* Advisory Action, p. 5 – 10. However, the Office’s combination of prior art to fill the gaps recited in the present invention is legally improper under Section 102 because every limitation of the present invention under Section 102 “must identically appear in a single prior art reference[.]” *Gechter v. Davidson*, 116 F.3d 1454 (Fed. Cir. 1997). Thus, the Office’s reliance on the combination of prior art to overcome the present invention under 35 U.S.C. § 102 is legally impermissible.

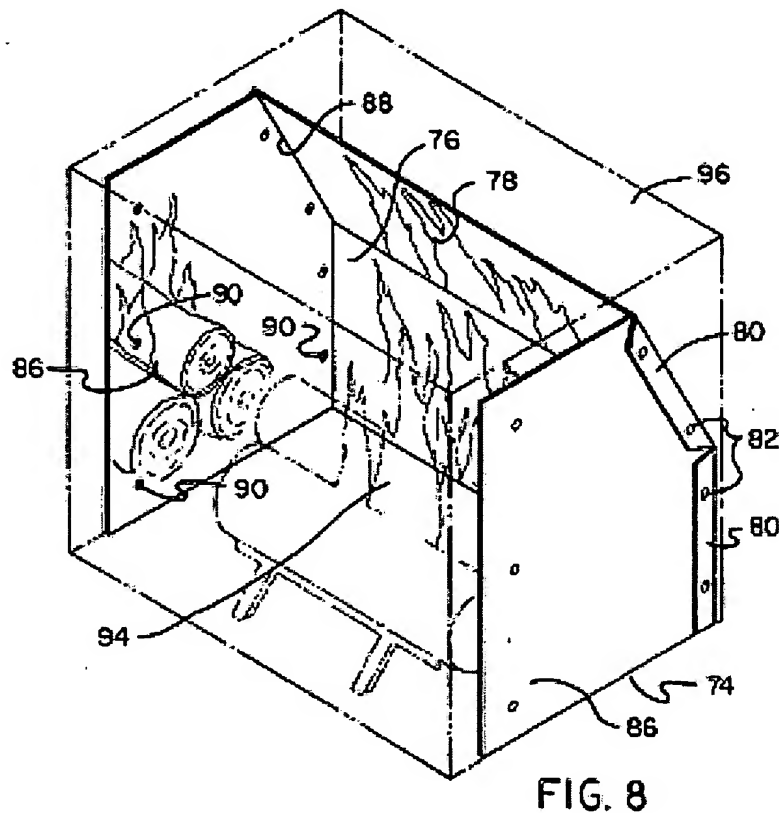
respectfully requests that these rejections be overturned for the following reasons.

“Under 35 U.S.C. 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim.” *Gechter v. Davidson*, 116 F.3d 1454 (Fed. Cir. 1997) (emphasis added); *see also Aguayo v. Universal Instruments Corp.*, 356 F.Supp.2d 699, 741 (S.D. Tex. 2005). Because the Kasulis patent fails to disclose every limitation of the present invention’s claims, the Kasulis patent is not an anticipatory reference to the claims for several reasons.

As stated above, Claims 1, 11 and 17 all recite that each light reflective material is measured to substantially fit within, and couple substantially parallel to, the interior surface structure of the firebox so that a three-dimensional view consistent with the predetermined interior surface of the firebox is provided. The recitation of the term “each” light reflective material is important, because this recitation applies to every light reflective material utilized in this invention.

In direct contrast, the Kasulis patent discloses a viewable surface 76 which has a separate and different angular surface plane than viewable surface 78 (*see* the Kasulis patent, Figure 8, reproduced below, where surface 78 is at approximately a 45 degree angle in relationship to surface 76 so that the Kasulis patent does not teach that each light reflective material is substantially parallel to the interior surface structure of the firebox as recited in independent claim 1, 11 and 17). Indeed, the Kasulis patent expressly teaches away from the present invention, as it requires viewable surfaces having “an orientation offset from the vertical within a fireplace” (*see* Kasulis patent, Abstract), so that the rear surface has a different angular position than the surface 78 (*see* Kasulis patent, Col. 5, l. 66 – Col. 6, l. 3). This is a very specific orientation which is contrary to the teachings of the present invention. Because of this very specific orientation, the Kasulis patent can never achieve the limitation of a reflective material which is substantially parallel to the interior surface of a firebox or fire chambers as recited by

the present claims, thereby maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber. Indeed, the Kasulis patent explains that the reason the upper angled mirror (element 78) "is set at an angle that reflects heat" (*see* Col. 7, l. 15-17), which is an entirely different purpose than that of the present invention. As such, the Kasulis patent does not identically or inherently disclose every limitation of Claims 1, 11 and 17 in order for it to be an anticipatory reference to these claims.



In the Advisory Action, the Office reasons that because "at least three of the reflectors (76, 86, 88; see Kasulis figure 8, reproduced above) of Kasulis are arranged, attached aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom)", such

disclosure anticipates the present invention. In the Advisory Action, the Office also relies on Figure 8 of the Kasulis patent, and points to only some of the Kasulis light reflective materials. *See* Advisory Action, p. 3. Notably, the Office completely ignores substrate element 78 as shown above (element 78 also a light reflective material, highlighted in yellow color above). As seen in the graphic above, element 78 expressly shows that this substrate has a different angular position than the surfaces relied on by the Office, and an angular position which is not parallel or even substantially parallel to the interior firebox chamber. Indeed, even the simulated “flames” depicted on element 78 in Figure 8 of the Kasulis patent are of a different orientation and angle of the simulated “flames” found on element 76. Thus, the Kasulis patent fails to teach that “each light reflective material is measured to substantially fit within, and couple substantially parallel to, the interior surface structure of the firebox” as recited by the present invention.

Moreover, the rejected claims recite that each light reflective material is “measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace.” There is absolutely no disclosure in the Kasulis patent that its surfaces “substantially fit” within the interior firebox because the Kasulis patent is expressly intended to have one of the major surfaces (elements 68, 78) be angled away from an interior surface of the firebox, and supported by brackets through a hinge, so that the angular position of these major surfaces can be angled differently away from or towards the firebox interior wall through a series of dials 44 (*see* Kasulis patent, Col. 5, ll. 51-57) for heat reflection (Col. 7, l. 15-17). As such, the Kasulis patent expressly teaches away from the present invention.

The claims also recite that the invention provides “a three-dimensional view consistent with the pre-determined interior surface of the fire chamber”. While this recitation is not required to overcome the Kasulis patent as explained above, such recitation further distinguishes the present invention from the Kasulis patent because Kasulis’ use of angled surfaces will necessarily result in a view which is not consistent with the pre-determined interior surface of the fire chamber. In support of this position, attached as Exhibit A to Applicants’ Response to

August 24, 2005 Office Action is the Affidavit Pursuant To 37 C.F.R. 1.132 of Dr. Yashvinder Sabharwal (courtesy copy attached hereto as Exhibit B). Dr. Sabharwal is a person of significant experience in the field of optical sciences and optical engineering. Dr. Sabharwal testifies that the present claims “recite that the optical view by a viewer of the firelight in the fireplace or firebox will be different in accordance with the present invention when compared to the view created by the Kasulis disclosure. The Kasulis disclosure teaches the use of mirrors positioned at angles to the interior surfaces of the fireplace or firebox, which will create an optical view that is different in perspective from the original three-dimensional construction of the fireplace or firebox. (See *e.g.*, Kasulis disclosure, Figs. 2, Col. 5, *ll.* 53 – 56; Fig. 8, Col. 5, *ll.* 59 – 62). Dr. Sabharwal provides evidence that any images reflecting off the Kasulis patent surfaces (for example, surfaces 76, 78 in the Kasulis disclosure Figure 8) would necessarily present an elongated optical image of the firelight to a viewer of the Kasulis invention. The present invention, in contrast to the Kasulis disclosure, teaches the positioning of the reflective material to be substantially parallel to the interior surfaces of the fireplace or firebox, maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber.” (citations omitted). As such, as a person highly skilled in the optical arts, Dr. Sabharwal provides further evidence supporting Applicant’s position that the present claims are not disclosed anywhere by the Kasulis patent, but rather, teaches away from the present invention. Indeed, because the simulated “flames” depicted on element 78 in Figure 8 of the Kasulis patent are drawn to a different orientation and angle of the simulated “flames” found on element 76, the Kasulis patent expressly teaches that the flames would not result in “a three-dimensional view consistent with the pre-determined interior surface of the fire chamber”, because as shown in Kasulis Figure 8, the flames on light reflectore 78 present a skewed view compared to the flames found on light reflector 76. In response to Dr. Sabharwal’s testimony, the Office states that it considered Dr. Sabharwal’s evidence, and “But for [Dr. Sabharwal’s] opinion, no factual evidence has been presented that [the Kasulis patent] would not provide a three-dimensional view at least to some degree and at least from one viewer’s ‘perspective’”.

However, once Appellants' evidence is presented, it is now up to the Office to provide evidence which would rebut Dr. Sabharwal's testimony. *See* MPEP § 716.01(c). The Office has failed to do so. Merely acknowledging that the Office has considered the evidence without rebutting such evidence and without providing any rebutting factual evidence is highly prejudicial to the Appellants. Moreover, the Office fails to consider the skewed flame view shown in Kasulis Figure 8.

It is clear that Dr. Sabharwal's expert opinion must be considered in light of the nature of the matter sought to be established, the strength of any opposing evidence, the expert's interest in the outcome of the case and the presence or absence of factual support for the expert's opinion. TMEP § 716.01(c) (citations omitted). Clearly, the nature of the matter to be established by Dr. Sabharwal is that due to the specific structure recited in the Kasulis disclosure, it would not result a structure where each light reflective material couples substantially parallel to the firebox's pre-determined interior surface to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox. Further, outside of reliance on the Kasulis reference, the Office provides no other evidence to overcome Dr. Sabharwal's opinion. Dr. Sabharwal has no interest in the outcome of this matter. Finally, Dr. Sabharwal's opinion clearly states forth, in detail with recitation to the portions of the Kasulis patent, the factual evidence to support his opinion.

In this case, the Office admittedly relies on "at least three" of the Kasulis reflectors to reason that such arrangement will result in "maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber". This is factually incorrect. As seen in the Kasulis reference, the firebox is constructed as generally square surfaces (the firebox interior surfaces are not specifically labeled in the Kasulis reference, but can be generally defined through analogy by arrows from elements 10, 20 and 46). While "at least three" reflectors are oriented substantially parallel to three of the firebox's interior surface, the "fourth" Kasulis reflector at the back, rear surface of the firebox clearly is not oriented

substantially parallel to the firebox's rear interior surface. In direct contrast, the Kasulis has two separate viewable surfaces 76 and 78, wherein viewable surface 78 has a separate and different angular surface plane than that the Kasulis rear interior surface of the firebox (see Kasulis Fig. 8). Kasulis specifically states that this rear viewable surface is a "mirror in an orientation offset from the vertical within a fireplace behind the fire" (see Kasulis, Col. 2, ll. 5 – 6, 12 -13; Col. 3, l. 49, ll. 56 – 57) or is otherwise an "angled mirror" (Kasulis, Col. 5, ll. 61 – 62). As such, structurally, the Kasulis reference does not read on the present invention because the Kasulis reference can never provide a three-dimensional view consistent with the pre-determined interior surface of the firebox because one of the Kasulis mirrors is oriented off-set from the interior surface of the firebox. Dr. Sabharwal's Affidavit supports this position (See Sabharwal Affidavit, ¶ 10), and the Office has not provided any evidence to contradict this position.

Instead, the Office is reading disclosure into Kasulis that does not exist (either expressly or inherently), which is impermissible under Section 102. Moreover, while the Office relies on Kasulis' disclosure of three reflectors to reject the present application under Section 102, the Office is ignoring the recitation in the present claims that each light reflective material is parallel to the firebox's interior surface, thereby providing a three-dimensional view consistent with the interior surface of the firebox – the Kasulis patent will never achieve such a view because one of the Kasulis' mirrors is not parallel to the rear firebox interior surface.

The Office also states that the claims' phrase "measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace" is a recitation of intended use, and fails to impart a structural limitation to distinguish the claimed invention over the art of record. *See* Advisory Action, p. 6. However, Section 102 does not require any recitation of a structural limitation. As such, the Applicant finds it difficult to respond to the Office's statement. Nevertheless, as identified above, the claims positively recite a structural limitation that further distinguishes the present invention over the Kasulis patent. As long as those of ordinary skill in the art realize that the dimensions could easily be obtained for a firebox, patent law does not

require “that all possible lengths corresponding to the” dimensions found in all fireboxes made be listed in the specification, “let alone, they be listed in the claims.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565 (Fed. Cir. 1986). In the Advisory Action, the Office fails to mention, consider or even distinguish this mandate by the Court of Appeals for the Federal Circuit. Considering that the present invention concerns basic fireplaces which have existed for many years, the Applicant submits that those of skill in the art would understand the phrase “each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the firebox” as it applies to this invention, which is a functional limitation relative to the varying measurements found inside various-sized fireboxes.

Because the Kasulis patent fails to disclose every limitation of the present independent claims identically pursuant to 35 U.S.C. § 102, the Kasulis patent fails to anticipate the rejected independent claims (i.e., Claims 1, 11 and 17), and those claims which depend on these claims (i.e., claims 2-6, 8-10, 12-16 and 18-20).

Dependant claims 2, 12 and 18 recites that each image reflective material is “high tempered mirrored glass, the viewable surface comprising a mirrored glass substrate adapted to provide light and image reflectivity while diminishing light and image scattering”, not disclosed by the Kasulis patent (either inherently or expressly).

Dependent claim 8 recites that each light reflective material is “fastened to the interior surfaces of the fireplace by heat-resistant adhesive”, not disclosed by the Kasulis patent (either inherently or expressly).

Dependent claim 16 recites that the light reflective material is “adapted for placement on and coupling to the interior surface wall, the bottom surface or the ceiling”, not disclosed by the Kasulis patent (either inherently or expressly).

For each of the foregoing reasons, the Kasulis patent fails to anticipate the rejected independent claims (*i.e.*, Claims 1, 11 and 17), and those claims which depend on these claims (*i.e.*, claims 2-10, 12 - 16 and 18 - 20). The Appellant respectfully requests that these rejections be overturned.

2. Dependent Claims 8 and 9 Are Patentable Over the Kasulis patent in view of Japan disclosure 2003-79507 Pursuant to 35 U.S.C. § 103

The Office rejects dependent Claims 8 and 9 as being unpatentable over the Kasulis patent in view of Japan disclosure 2003-79507 (the “Japan disclosure”) under 35 U.S.C. § 103. Notably, the Office did not reject independent Claim 1 (which Claims 8 and 9 depend upon) as being unpatentable over the Kasulis patent in view of Japan disclosure under Section 103.

While a combination of prior art is allowed to support a rejection under Section 103, such a rejection cannot be asserted against dependent claims when the corresponding independent claim is allowed under Section 103. *See Bloom Engineering Co. Inc. v. N.A. Manuf. Co., Inc.*, 129 F.3d 1247 (Fed. Cir. 1997) (“a dependent claim incorporates by reference all of the limitations of the claim from which it depends.”); *see also In re Young*, 927 F.2d 588 (Fed. Cir. 1991) (“all claims stand or fall together with representative independent claim 1”); *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888 (Fed. Cir. 1984) (“When independent and dependent claims have been argued together, the validity of the latter stands or falls with that of the former.”).

Here, it follows that since Claims 8 and 9 are dependant upon independent Claim 1, and because the Office did not reject Claim 1 under Section 103 as being unpatentable over the Kasulis patent in view of the Japan disclosure, then neither claims 8 nor 9 can be rejected under Section 103 (stated differently, because Claim 1 is patentable over the Kasulis patent in view of Japan disclosure, then dependant Claims 8 and 9 are necessarily patentable over the Kasulis patent in view of the Japan disclosure). As such, Claims 8 and 9 must stand as patentable, since they are

dependant upon a non-rejected claim (Claim 1) pursuant to Section 103.

Without expressly stating such, the Office appears to believe that since independent Claim 1 was rejected under 35 U.S.C. § 102, that this rejection would automatically cross-over into a rejection under 35 U.S.C. § 103. However, this belief is legally incorrect, because the requirements for Section 102 rejections legally differ from the requirements of Section 103 rejections. *See Tamarack Products Inc. v. Moore Business Forms, Inc.*, 1996 WL 134263, * 22 n. 14 (N.D. Ill. 1996) (“An analysis of invalidity under section 103 (‘obviousness’) differs from an analysis of invalidity under section 102(b) (‘anticipation’) in that anticipation is based on the relationship between the challenged patent and a single prior art reference, whereas obviousness compares the challenged patent to the whole of the prior art.”); *see also Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985) (“Anticipation under Section 102 can be found only if a reference shows exactly what is claimed; where there are differences between the reference disclosures and the claim, a rejection must be based under Section 103.”).

The Appellant has articulated this position twice to the Office (*see* Response to August 24, 2005 Office Action” *pp.* 6, 7; and Response to February 8, 2006 Office Action, *pp.* 3, 4). In both instances, the Office has completely ignored this position. The Applicant is not required to present any further arguments when the Office is not following the legal requirements of either Section 102 and/or Section 103 rejections. Indeed, for the Appellant to attempt to defend against the Office’s improper Section 103 rejection would result in forcing the Appellant to create unnecessary and unwarranted prosecution history arguments, which may later be detrimental and highly prejudicial to the Appellant should litigation arise as prosecution history estoppel.

The Appellants respectfully request that the rejection of independent claims 8 and 9 pursuant to Section 103 be overturned.

VIII. CONCLUSION

It is respectfully submitted that in view of the foregoing, all of the pending claims are patentable over the cited prior art references, whether alone or in any combination, and the Board is respectfully requested to overturn all rejections of record and allow this application to issue.

Dated: December 12, 2006

Respectfully submitted,

By: Kevin Lynn Wildenstein
Kevin Lynn Wildenstein
USPTO Registration No. 39,072

Southwest Intellectual Property Services, LLC
9400 Holly Avenue NE, Building 4H
Albuquerque, New Mexico 87122
Phone: (505) 944-2500
Fax: (505) 944-2501

APPENDIX A
(Claims on Appeal)

1. (Previously Presented): A firelight reflective system for use within a fireplace having a firebox with a pre-determined interior surface structure, the system comprising at least one light or image reflective material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the firebox, the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox.
2. (Previously Presented): The firelight reflective system of Claim 1, the light or image reflective material being high tempered mirrored glass, the viewable surface comprising a mirrored glass substrate adapted to provide light and image reflectivity while diminishing light and image scattering.
3. (Previously Presented): The firelight reflective system of Claim 2, the fireplace having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein which is adapted to house a fire flamelight producing element.
4. (Previously Presented): The firelight reflective system of Claim 3, the fire flamelight producing element comprising a gas system adapted to generate and maintain one or more fire flames within the fire chamber.

5. (Previously Presented): The firelight reflective system of Claim 3, the fire flamelight producing element comprising a flame simulator.
6. (Previously Presented): The firelight reflective system of Claim 3, the fire flamelight producing element comprising wood adapted to burn by fire.
7. (Withdrawn).
8. (Previously Presented): The firelight reflective system of Claim 3, the coupling surface being fastened to the interior surfaces of the fireplace by heat-resistant adhesive.
9. (Previously Presented): The firelight reflective system of Claim 3, the adhesive being adapted to substantially permanently couple the coupling surface to the interior surfaces of the fireplace.
10. (Previously Presented): The firelight reflective system of Claim 3, the coupling surface being fastened to the interior surfaces of the fireplace by at least one predetermined fastener.
11. (Previously Presented): A firelight reflective system for use within a firebox having a firebox with a pre-determined interior surface structure, the system comprising a plurality of flamelight reflective sheets, each sheet having a viewable surface and a coupling surface, each sheet adapted to be placed within, and coupled substantially parallel to, a pre-selected portion of

the interior surface of the firebox, the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox.

12. (Previously Presented): The firelight reflective system of Claim 11, each flamelight reflective sheet being high tempered mirrored glass, the viewable surface comprising a mirrored glass substrate adapted to provide light and image reflectivity while diminishing light and image scattering.

13. (Previously Presented): The firelight reflective system of Claim 12, the firebox having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein which is adapted to house a fire flamelight producing element.

14. (Previously Presented): The firelight reflective system of Claim 13, the fire flamelight producing element comprising a gas system adapted to generate and maintain one or more fire flames within the fire chamber.

15. (Previously Presented): The firelight reflective system of Claim 13, the fire flamelight producing element comprising a flame simulator.

16. (Previously Presented): The firelight reflective system of Claim 13, the firebox having at least one surrounding interior surface wall, a bottom surface and a ceiling thereby forming a fire chamber therein which is adapted to house a fire flamelight producing element, each sheet

adapted for placement on and coupling to the interior surface wall, the bottom surface or the ceiling.

17. (Previously Presented): A method for reflecting firelight emitting from a fireplace having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein housing a fire flamelight producing element, the method comprising the steps of:

- a) introducing at least one light or image reflective material, the material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the fire chamber, and
- b) removeably attaching a pre-selected coupling surface to a predetermined surface portion within the fire chamber, the method adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the fire chamber.

18. (Previously Presented): The method for reflecting firelight of Claim 17, the light or image reflective material comprising high tempered mirrored glass and the viewable surface comprising a substrate adapted to provide light and image reflectivity while diminishing light and image scattering.

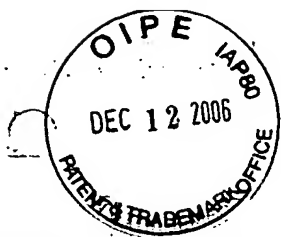
19. (Previously Presented): The method for reflecting firelight of Claim 18, the light or image reflective material being adapted to reflect light from the viewable surface so that an angle

of incidence of the light and an angle of reflection of the light are substantially or exactly equal to a viewer of the system.

20. (Previously Presented): The method for reflecting firelight of Claim 19, the fire producing element comprising a flame simulator.

APPENDIX B
(Evidence Appendix)

A courtesy copy of Affidavit Pursuant To 37 C.F.R. § 1.132 of Dr. Yashvinder Sabharwal is herewith attached. This Affidavit was previously submitted in Appellants' Response to August 24, 2005 Office Action (filed December 23, 2005).



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING DIVISION

Applicant:	HARP <i>et al</i>	Docket Ref.:	FIREPLACE
Serial No.:	10/766,628		
Filing Date:	Jan. 28, 2004	Group Art Unit:	3749
Title:	FIRELIGHT REFLECTIVE SYSTEM AND METHOD	Examiner:	Carl D. Price

AFFIDAVIT PURSUANT TO 37 C.F.R. 1.132

I, Yashvinder Sabharwal, declare that I am a resident of Tucson, Arizona (Pima County). Based upon my personal knowledge, I would competently testify to the truth of the following:

1. I received a Bachelors of Science degree in Optics from the Institute of Optics at the University of Rochester in 1992. I received a Masters of Science degree in Optical Sciences from the Optical Sciences Center at the University of Arizona in 1994. I received a Ph.D. degree in Optical Sciences from the Optical Sciences Center at the University of Arizona in 1998.

2. Work History

March 2005 - Present Director, Product Marketing
 Photometrics, Ltd., Tucson, AZ.

Responsible for product management of various optical, electronic, and software products.

July 1996 – Mar 2005 CO-FOUNDER
 Optical Insights, LLC, Santa Fe, NM.

Designed and manufactured imaging products for various applications. Currently manufacturing MultiSpec Imager™ line of products for multi-spectral imaging and temperature measurement applications.

Optical Lens Design - Diffraction analysis, lens design and tolerancing of complicated optical systems including miniature optics and gradient index lenses.

Software Development – Design and development of Windows-based software for processing of multispectral images using Visual Basic and Visual C.

Optical Insights was acquired by Photometrics in March 2005.

Jan. 1999 – Sept. 1999 RESEARCH ASSOCIATE:
 Dept. of Radiology, University of Arizona, Tucson, AZ.

Optical Design - Design and tolerancing of miniaturized objectives for high-resolution imaging inside the body. Design of mechanical components for focus control and optical sectioning for in-vivo slit scanning confocal microscope.

Fluorescence Imaging – Evaluating different fluorescent compounds, including PDT agents, for in-vitro and in-vivo imaging at the cellular level. Evaluating the use of multispectral imaging techniques with multiple fluorescent agents to improve image contrast.

Sept. 1992 – Dec. 1998 GRADUATE RESEARCH ASSOCIATE: Advisor: Dr. Arthur F. Gmitro
 Optical Sciences Center/Dept. of Radiology, University of Arizona, Tucson, AZ.

Reseaching the use of optics technology in various medical imaging applications:

June 1992 - Aug. 1992

OPTICAL ENGINEER

E.I. duPont de Nemours Company, Imaging Systems, Wilmington, DE.

Heads-Up-Display - Developed image processing software in C for an optical test bench designed to measure and interpret the modulation transfer function (MTF) of holographic heads-up-display for car windshields.

June 1991 - Aug. 1991

OPTICAL ENGINEER

Hughes Danbury Optical Systems, Optical Metrology Dept., Danbury, CT.

X-ray Mirror Testing - Collaborated in the design and construction of a Twyman-Green interferometer system used to test a parabolic x-ray mirror.


Engineering Support - Developed software to process data acquired from mechanical and optical profilometers and from optical system used to test star trackers.

3. I have reviewed the relevant patent prosecution history with regard to the above-titled pending patent application. I am also aware of the current claim status for the above-titled pending patent application as amended in the response document submitted concurrently with this Affidavit.
4. Claim 1 of the present application currently recites: "A firelight reflective system for use within a fireplace having a firebox with a pre-determined interior surface structure, the system comprising at least one light or image reflective material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the firebox, the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox."
5. Claim 11 of the present application currently recites "A firelight reflective system for use within a firebox having a firebox with a pre-determined interior surface structure, the system comprising a plurality of flamelight reflective sheets, each sheet having a viewable surface and a coupling surface, each sheet adapted to be placed within, and coupled substantially parallel to, a pre-selected portion of the interior surface of the firebox, the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox."
6. Claim 17 of the present application currently recites "A method for reflecting firelight emitting from a fireplace having at least one surrounding surface wall and a bottom surface thereby forming a fire chamber therein housing a fire flamelight producing element, the method comprising the steps of: a) introducing at least one light or image reflective material, the material having a viewable surface and a coupling surface, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the fire chamber, and b) removeably attaching a pre-selected coupling surface to a predetermined surface portion within the fire chamber, the method adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the fire chamber. "
7. I have reviewed U.S. Patent No. 5,469,839 to Kasulis et al (the "Kasulis disclosure").

8. I have reviewed the Office's Office Action regarding this application dated 8/24/05 (the "August 24, 2005 Office Action").
9. In the August 24, 2005 Office Action, the Office rejects Claims 1 – 6 and 10 – 20 as being anticipated by the Kasulis Patent. As support for rejecting these claims, the Office recites that "since each panel of [the Kasulis Patent] displays an image to a viewer that is located within the vertical surfaces, the reflective panels of [the Kasulis Patent] would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems in the manner set forth in applicant's claims." (See August 24, 2005 Office Action, p. 8).
10. In my professional opinion as an individual highly skilled in the optical arts, the Office's analysis is incorrect. The Office's recitation implies that "an angle of incidence and an angle of reflection are both substantially equal as viewed by a viewer of the systems" *because* "each panel of [the Kasulis disclosure] displays an image to a viewer that is located within the vertical surfaces." There is no causal relationship in this case. It is a basic law of physics that the light incident on a reflective surface will *always* have an angle of reflection equal to the angle of incidence without consideration of the viewer. Based on the status of the currently amended claim set, there is no attempt to patent such a fundamental law of physics. However, the claims recite that the optical view by a viewer of the firelight in the fireplace or firebox will be different in accordance with the present invention when compared to the view created by the Kasulis disclosure. The Kasulis disclosure teaches the use of mirrors positioned at angles to the interior surfaces of the fireplace or firebox, which will create an optical view that is different in perspective from the original three-dimensional construction of the fireplace or firebox. (See e.g., Kasulis disclosure, Figs. 2, Col. 5, ll. 53 – 56; Fig. 8, Col. 5, ll. 59 – 62). Any images reflecting off the Kasulis patent surfaces (for example, surfaces 76, 78 in the Kasulis disclosure Figure 8) would necessarily present an elongated optical image of the firelight to a viewer of the Kasulis invention. The present invention, in contrast to the Kasulis disclosure, teaches the positioning of the reflective material to be substantially parallel to the interior surfaces of the fireplace or firebox, maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber (see ¶¶ 4 – 6 above).
11. The undersigned being warned that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, declares that all statements made of his own knowledge are true; and all statements made on information and belief are believed to be true.

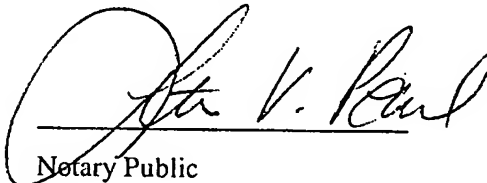
FURTHER AFFIANT SAYETH NAUGHT

Executed this 21st day of December, 2005.

By: 
Yashvinder Sabharwal, Ph.D.

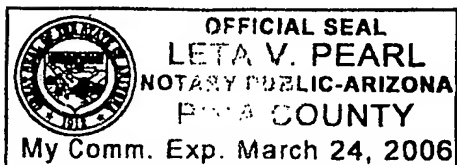
STATE OF ARIZONA)
) §§
COUNTY OF PIMA)

SUBSCRIBED AND SWORN TO BEFORE me this 21st day of December, 2005, by Yashvinder Sabharwal.


Notary Public

My commission expires:

- 24 March 2006



APPENDIX C
(Related Proceedings Appendix)

There are no proceedings or decisions related to this Appeal.